Claims:

1. A bacterial strain of *Lactiplantibacillus plantarum* Provege, deposited on 24 August, 2021 with DSMZ under number DSM 33989.

2. A biologically active culture comprising the strain according to claim 1, and a cultural medium or residues of it, for example peptone water containing 0.1% peptone.

3. An encapsulated product, such as freeze-dried powder, a tablet, or a capsule, comprising the strain according to claim 1.

4. A food or feed composition, a food or feed product, a formulation for food or feed enrichment, a food or feed supplement, or a nutraceutical formulation, comprising the strain according to claim 1, the biologically active culture according to claim 2, or the encapsulated product according to claim 3.

5. A method of manufacturing a probiotic food or feed composition, comprising the steps:
- a) contacting the bacterial strain according to claim 1, the biologically active culture according to claim 2, or the encapsulated product according to claim 3, with a food or feed composition;
optionally ,
- b) fermenting the food or feed composition obtained from the step a).

6. The method according to claim 5, wherein
- the step a) comprises adding the biologically active culture according to claim 2 into the food or feed composition in a concentration of 0.01 - 10.00 vol.%, based on total volume of the whole composition having the active culture added in, preferably 0.05 – 5.00 vol.%, more preferably 0.10 – 1.00 vol.%, and mixing, thereby obtaining a mixture; and
- the step b) comprises incubating the mixture at 25 - 40 ˚C, preferably 30 - 35 ˚C, for 4 - 48 hours, preferably 6 - 24 hours.

7. A method of increasing nutritional value of food- or feed-grade substance, comprising:

- fermenting a mixture of a food- or feed-grade substance and the bacterial strain according to claim 1, the biologically active culture according to claim 2, or the encapsulated product according to claim 3.

8. The method according to claim 7, wherein the nutritional value includes the quantity value of at least an amino acid and/or at least a mineral and/or at least a vitamin, and
- the mixture comprises the biologically active culture according to claim 2 in a concentration of 0.01 - 10.00 vol.%, based on total volume of the mixture, preferably 0.05 – 5.00 vol.%, more preferably 0.10 – 1.00 vol.% in the food- or feed-grade substance; and
- fermenting the mixture is performed at 25 - 40 ˚C, preferably 30 - 35 ˚C, for 4 - 48 hours, preferably 12 - 24 hours; and the method optionally further comprises
- drying the fermented mixture at 40 - 120 ˚C, preferably 50 - 80 ˚C, more preferably 60 - 70 ˚C, for 4 - 96 hours, more preferably 24 - 48 hours.

9. The method according to claim 7 or 8, wherein the food- or feed-grade substance is grains or legumes/pulses, such as oat, quinoa or fava bean.

10. The method according to any of claims 7 to 9, wherein the amino acid is alanine, histidine, isoleucine, leucine, lysine, methionine, threonine, tyrosine, or valine.

11. The method according to any of claims 7 to 10, wherein the mineral is calcium, iron, or zinc.

12. A method of prolonging shelf-life of a food or feed product, comprising fermenting a mixture of a food or feed product or a starting material of a food or feed product and the bacterial strain according to claim 1, the biologically active culture according to claim 2, or the encapsulated product according to claim 3.

13. The method according to claim 12, wherein

- the mixture comprises the biologically active culture according to claim 2 in a concentration of 0.01 - 10.00 vol.%, based on total volume of the mixture, preferably 0.05 – 5.00 vol.%, more preferably 0.10 – 1.00 vol.%, and
- fermenting the mixture is performed at 25 - 40 ˚C, preferably 30 - 35 ˚C, for 4 - 48 hours, preferably 12 - 24 hours.

14. Use of the strain according to claim 1, the biologically active culture according to claim 2, or the encapsulated product according to claim 3, in manufacturing a food or feed composition, a food or feed product, a formulation for food or feed enrichment, a food or feed supplement, or a nutraceutical formulation.